



The **Anaphylaxis** campaign
Helping people with severe allergies live their lives

Your questions answered

We receive a wide variety of questions from our corporate members and always do our best to answer them with the help of expert advisers. Sometimes the more unusual questions provide the most thought-provoking answers. Here is a selection of those questions and answers that are out of the ordinary.

Penicillin residues in food

A customer who says she is allergic to penicillin believes she has reacted to one of our products. This product contains chicken, among other ingredients. Is there evidence of cross-reactivity between penicillin and any food?

First of all, your customer needs to consider whether she is genuinely allergic to penicillin. She may already know the answer to that, particularly if she has seen an allergist. But many people think they react to penicillin, when in fact their symptoms are not symptoms of allergy. If she hasn't already seen an allergist, we would advise her to do so.

Assuming she *is* allergic to penicillin, how would we explain her reaction to your product? Our medical adviser does **not** believe there is cross-reactivity between penicillin and any food. He thinks it just possible that she reacted to residues of penicillin in the food. He has seen cases where people with penicillin allergy have reacted to penicillin residues in milk, as a result of veterinary use of penicillin. Therefore it would seem to be a possibility that your customer reacted to penicillin residues in chicken.

It is important that manufacturers focus on ensuring that no residues exist.

Where penicillin is used as a veterinary medicine there are legally prescribed periods of withdrawal prior to slaughter. This applies to veterinary medicines in general, not just penicillin.

There are tests available for antibiotics in food. If any food company believes penicillin may be an issue for them, they can seek expert advice, initially through the Anaphylaxis Campaign.

Soya sauce

Would people with soya allergy be advised to avoid soy sauce?

We do not know of any research that has provided an answer to this question. Soy sauce is made from highly processed soya but the extent of protein denaturation and its impact on allergy has not, to the best of our knowledge, been assessed. If someone has been eating soy sauce safely before being diagnosed with soya allergy it may well be safe for them to continue. Otherwise they should be advised to avoid it until further research suggests it is safe.

Sunflower seeds

Do sunflower seeds cause allergic reactions?

Just about any food that contains protein could potentially be an allergen for someone, somewhere. Although sunflower seeds don't appear on the official EU list, they are most certainly allergens capable of causing severe reactions. As far as we know there are no prevalence figures for sunflower seed allergy. It is less common than sesame allergy, but we suspect that sunflower could one day appear on the radar as an important allergen, along with other seeds such as poppy and pumpkin. The oil produced from sunflower seeds would be relatively safe if it was refined.

Caffeine

A lady had a reaction after drinking a large cappuccino, which was meant to be decaffeinated but she believes it was caffeinated. She says she is allergic to caffeine. Can you shed any light on this?

Our helpline has dealt with many thousands of allergy cases over the years but we can't remember any cases of genuine caffeine allergy. Most caffeine-related enquiries were from people whose symptoms suggested intolerance, or some other mechanism, rather than allergy. We would guess that caffeine allergy is very rare indeed.

However, it doesn't seem to be non-existent. At least one report in the medical literature suggests there is such a thing as genuine caffeine allergy. One of our advisers tells us:

"Many years ago I saw a patient who believed he might have caffeine allergy. I obtained pure caffeine and he had a small skin test reaction to it. I then arranged a series of active and placebo challenges and confirmed the association. To me this was immunological (i.e. an allergy), although without access to a specific IgE test (they weren't available then and they aren't available now) I cannot be certain that this was IgE-mediated although I strongly suspect it.

“The lady who is the subject of your query is very unlikely indeed to be suffering a true caffeine allergy, but it’s possible.”

Manufacturers need to have procedures in place to ensure that there is no cross-packing between caffeinated and what is sold as decaffeinated. Likewise food service outlets need processes to minimise the risk of the customer being served the wrong version.

Prawn crackers

Are prawn crackers allergenic even though the prawn has been highly processed and therefore would they pose a prawn cross-contamination risk for other products?

We were told that the manufacturer who raised this query purchases dry prawn cracker pellets that have been processed by steaming a blend of prawn and tapioca for 110°C for 7-13 minutes. The pellets have been cooled and dried. The prawn content of the material at this point is 20%. The manufacturer fries the pellets in vegetable oil at 180°C for 10 to 15 seconds, providing the finished product. Prawn makes up 10-15%.

The manufacturer was interested in the effect the processing has on denaturing the prawn protein and wondered if this was sufficient to reduce the allergenicity and therefore minimise any risk of cross-contamination.

Unfortunately, there is no reassuring answer in this case. There have been occasional reports of reactions to prawn crackers, suggesting that the proteins are allergenic even after processing. Our expert adviser suspects that the only way to know for sure will be by doing clinical studies including food challenges with allergic patients.

As far as cross-contamination is concerned, the company would need to review its segregation procedures. Managers would need to be thinking about dedicated fryers or else planning the production so that the oil used to fry the pellets is discarded after use. Otherwise appropriate labelling would have to be introduced to protect people with prawn allergy.

Wasp venom transferred to food

If parts of a dead wasp were to end up in a food, could the venom pose a serious risk for people with wasp venom allergy?

Our adviser writes:

“The venom would still be viable even if the wasp was dead, but boiling the jam would partially denature it, and of course it would be eaten and not injected. One of the reasons that venom causes severe reactions is that it is injected directly into the body when someone is stung.

“To work out the overall risk, one has to multiply the chance of reacting to ingested venom by the chance of actually finding a dead wasp in the food product. This inevitably results in a very tiny risk, probably less than the chances of being run over by a bus! The risk is therefore extremely low.”

Clearly the most important point is that food providers need to keep wasps out of the food in the first place. Screening of windows and doors plus Electric Fly Killing units (EFKs) and any other precautions should be key to achieving this. These precautions should also be required of ingredients suppliers and managed by codes of practice, raw material specifications, second or third party audits etc.

Apple allergy

I understand that apple can cause allergic reactions for some people but only if the fruit is eaten raw and is not processed. Can you confirm this?

There is more than one protein in the apple that triggers allergic reactions.

People in northern Europe tend to be allergic to a protein that causes mild reactions (oral allergy syndrome). This protein is normally destroyed by heating or other processing.

People in southern Europe (e.g. Spain) tend to be allergic to another, more robust protein that commonly causes severe reactions. This protein survives heating and processing.

In the UK, most apple-allergic people are in that first category (i.e. mild allergy, and they can usually tolerate cooked or processed apple). In most cases this is a cross reaction with birch pollen and commonly they will suffer from hay fever in the spring when birch pollen is prevalent.

Although there are no reliable statistics, it is probably true to say that there is small proportion of people in the UK who are allergic to that other protein (i.e. the one that causes severe reactions, and survives heating and processing). It may be that some of the immigrant population fall into that category.

Cooked egg

Would baked egg powder, used in a brioche, trigger allergic reactions and might it also be a cross-contamination issue? The egg is pasteurised and dried down to a powder and the product is then baked.

While some people with egg allergy can tolerate processed egg, others react even when it is extensively processed and baked. Direct exposure and cross contamination could therefore be a problem. You would need to consider an advisory warning on any products that might be affected. However, it would be better to minimise the risk of cross contamination and avoid using a warning statement.

Omega 3 derived from fish

We are planning to introduce a smoothie-type product containing Omega 3 derived from fish. Clearly fish has to appear on the label, but should we take any other action to protect people from fish allergy?

Our feeling is that people wouldn't expect to see fish in a product of this kind and may well be taken unawares. People with food allergies frequently take certain products for granted. Despite our advice, many people don't read food labels as scrupulously as they should.

To be absolutely safe you would need to make the presence of fish known by adding a prominent flash on the packaging saying something like: "With Omega 3 derived from fish". This may not be ideal from a marketing point of view, but it will protect people with fish allergy and also help vegetarians make a suitable choice.

A fundamental question is this: "Is Omega 3 derived from fish actually a problem for people with fish allergy." The answer is that most fish oil is probably safe but most of it has not been tested so we can't be sure.

Bee propolis

Does the Anaphylaxis Campaign have any information about allergy to bee propolis?

Propolis is a resinous substance collected by honeybees from the buds of living plants. It has been used for several medical purposes (e.g. dermatitis, laryngitis, oral ulcers) because of its wide range of supposed benefits (anti-bacterial, anti-viral, anti-fungal, anti-inflammatory etc). But there is plenty of evidence that it can be a strong sensitiser and can trigger severe allergic reactions. To find our information, we relied on a review article from the National Centre for Epidemiology in Rome. This article revealed:

"From April 2002 to August 2007, 18 suspected adverse reactions associated with propolis-containing products were reported to the national surveillance system of natural health products, co-ordinated by the Italian National Health Institute. Sixteen reports concerned allergic reactions (with dermatological or respiratory symptoms), while two concerned the digestive tract. Some of the reactions were serious: six patients were admitted to hospital or visited an emergency department and in two of these a life-threatening event was reported. In seven patients (four of whom were children), an allergic predisposition was indicated."

The paper concludes that propolis should not be used by people with an allergic predisposition, in particular an allergy to pollen.

The paper makes the point that in Italy, products containing bee derivatives (bee pollen, royal jelly or propolis) are available to the public as food supplements. No label warning of possible adverse reactions is found on the packaging.